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10/645,431

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EXAMINER

QAZI, SABIHA NAIM

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1612

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/645,431	Applicant(s) JACOBSON ET AL.	
	Examiner Sabiha Qazi	Art Unit 1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 2-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 2-10 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/27/08</u> . | 6) <input type="checkbox"/> Other: _____ |

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Non-Final Office Action

Claims 1-11 are pending. Claims 2-10 are withdrawn from consideration as non-elected invention. No claim is allowed at this time. Amendments are entered.

Elected species is Benzene, 1-Chloro-4-cycloprop-enylmethyl¹.

Summary of this Office Action dated November 16, 2008

1. Information Disclosure Statement
2. Copending Applications
3. Specification
4. Double Patenting --- First Rejection (KOSTANSEK)
5. Double Patenting --- Second Rejection (LAMOLA et al.)
6. 35 USC § 112 (1) Scope of Enablement Rejection
7. 35 USC § 103(a) Rejection
8. Response to Remarks
9. Communication

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Copending Applications

Applicants must bring to the attention of the examiner, or other Office official involved with the examination of a particular application, information within their knowledge as to other copending United States applications, which are "material to patentability" of the application in question. MPEP 2001.06(b). See DAYCO Products Inc. v. Total Containment Inc., 66 USPQ2d 1801 (CA FC 2003).

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

¹ This compound can also be found in HCAPLUS, Registry Number 454251-27-5. This is enclosed for the Applicants' convenience.

Double Patenting --- First Rejection (KOSTANSEK)

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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Claim 1 and 11 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of KOSTANSEK². Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant compounds are taught by the prior art. See the cited references in the footnote.

KOSTANSEK has a common assignee with the instant application.

Substituent Z can be a group G, wherein G is an unsubstituted or substituted; unsaturated, partially saturated, or saturated, monocyclic, bicyclic, tricyclic, or fused; 4 to 14 membered carbocyclic or heterocyclic ring system wherein; 1) when the ring system contains a 4 membered heterocyclic ring, the heterocyclic ring contains 1 heteroatom; when the ring system contains a 5, or more: membered heterocyclic ring or a polycyclic heterocyclic ring, the heterocyclic or polycyclic heterocyclic ring contains from 1 to 4 heteroatoms; each heteroatom is independently selected from N, O, and S; the number of substituents is from 0 to 5 and each substituent is independently selected from X.

Double Patenting --- Second Rejection (LAMOLA et al)

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined

² EDWARD CHARLES KOSTANSEK. United States Patent No. 6,548,448 B2. See the entire document, especially

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application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 and 11 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7-10 of LAMOLA et al³. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant compounds are taught by the prior art. See the cited references in the footnote.

LAMOLA et al has a common assignee with the instant application.

Compound 1, which is found in Example 1 in lines 1-48 of col. 12, and Table 1 in col. 22.

³ ANGELO ANTHONY LAMOLA et al. United States Patent No. 6,770,600 B1. See the entire document, especially lines 24-67 in col. 4, lines 1-67 in col. 5, lines 1-2 in col. 6, examples, and claims.

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35 USC § 112 --- First Paragraph Scope of Enablement Rejection

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 and 11 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for certain compounds which are exemplified in the specification and described how to make and use does not reasonably provide enablement for all the compounds as claimed, such as when Z can be a group G, wherein G is an unsubstituted or substituted; unsaturated, partially saturated, or saturated, monocyclic, bicyclic, tricyclic, or fused; 4 to 14 membered carbocyclic or heterocyclic ring system wherein; 1) when the ring system contains a 4 membered heterocyclic ring, the heterocyclic ring contains 1 heteroatom; when the ring system contains a 5, or more: membered heterocyclic ring or a polycyclic heterocyclic ring, the heterocyclic or polycyclic heterocyclic ring contains from 1 to 4 heteroatoms; each heteroatom is independently selected from N, O, and S; the number of substituents is from 0 to 5 and each substituent is independently selected from X.

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

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The factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described in *In re Wands*, 8 USPQ2d 1400 (Fed. Cir. 1988). Among these factors are: (1) the nature of the invention; (2) the state of the prior art; (3) the relative skill of those in the art; (4) the predictability or unpredictability of the art; (5) the breadth of the claims; (6) the amount of direction or guidance presented; (7) the presence or absence of working examples; and (8) the quantity of experimentation necessary. When the above factors are weighed, it is the examiner's position that one skilled in the art could not practice the invention without undue experimentation.

The nature of the invention:

Presently claimed invention is drawn to a cyclopropene compound of formula as in claim 1 which contains a very large Markush group of compounds.

The predictability or unpredictability of the art

There is a lack of predictability in the art. The chemical synthesis and the use of the compounds of such a broad Markush group cannot be predicted..

The scope of the required enablement varies inversely with the degree of predictability involved, but even in unpredictable arts, a disclosure of every operable species is not required. A single embodiment may provide broad enablement in cases involving predictable factors, such as mechanical or electrical elements. *In re Vickers*, 141 F.2d 522, 526-27, 61 USPQ 122, 127 (CCPA 1944); *In re Cook*, 439 F.2d 730, 734, 169 USPQ 298, 301 (CCPA 1971). However, in applications directed to inventions in arts where the results are unpredictable, the disclosure of a

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single species usually does not provide an adequate basis to support generic claims. *In re Soll*, 97 F.2d 623, 624, 38 USPQ 189, 191 (CCPA 1938). In cases involving unpredictable factors, such as most chemical reactions and physiological activity, more may be required. *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970) (contrasting mechanical and electrical elements with chemical reactions and physiological activity). See also *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993); *In re Vaeck*, 947 F.2d 488, 496, 20 USPQ2d 1438, 1445 (Fed. Cir. 1991). This is because it is not obvious from the disclosure of one species, what other species will work. See MPEP 2164.03.

The breadth of the claims

The claims are broad. The Applicants are claiming a broad genus of the compound, which includes thousands of cyclopropene compounds. *In re Fisher*, 427 F.2d 833, 166 USPQ 18 (CCPA 1970) (contrasting mechanical and electrical elements with chemical reactions and physiological activity). See also *In re Wright*, 999 F.2d 1557, 27 USPQ2d 1510 (Fed. Cir. 1993); *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In re Dreshfield, 110 F.2d 235, 45 USPQ 36 (CCPA 1940), gives this general rule: "It is well settled that in cases involving chemicals and chemical compounds, which differ radically in their properties it must appear in an applicant's specification either by the enumeration of a sufficient number of the members of a group or by other appropriate language, that the chemicals or chemical combinations included in the claims are capable of accomplishing the desired result."

The amount of direction or guidance presented

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There is no guidance or direction presented to enable one skilled in the art to make and use of any one of the thousands of cyclopropene compounds including large number of heterocyclic groups as claimed. such as when Z can be a group G, wherein G is an unsubstituted or substituted; unsaturated, partially saturated, or saturated, monocyclic, bicyclic, tricyclic, or fused; 4 to 14 membered carbocyclic or heterocyclic ring system wherein; 1) when the ring system contains a 4 membered heterocyclic ring, the heterocyclic ring contains 1 heteroatom; when the ring system contains a 5, or more: membered heterocyclic ring or a polycyclic heterocyclic ring, the heterocyclic or polycyclic heterocyclic ring contains from 1 to 4 heteroatoms; each heteroatom is independently selected from N, O, and S; the number of substituents is from 0 to 5 and each substituent is independently selected from X.

The amount of guidance or direction needed to enable the invention is inversely related to the amount of knowledge in the state of the art as well as the predictability in the art. *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). The "amount of guidance or direction" refers to that information in the application, as originally filed, that teaches exactly how to make or use the invention. The more that is known in the prior art about the nature of the invention, how to make, and how to use the invention, and the more predictable the art is, the less information needs to be explicitly stated in the specification. In contrast, if little is known in the prior art about the nature of the invention and the art is unpredictable, the specification would need more detail as to how to make and use the invention in order to be enabling. >See, e.g., *Chiron Corp. v. Genentech Inc.*, 363 F.3d 1247, 1254, 70 USPQ2d 1321, 1326 (Fed. Cir. 2004) ("Nascent technology, however, must be enabled with a 'specific and useful teaching.' The law

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requires an enabling disclosure for nascent technology because a person of ordinary skill in the art has little or no knowledge independent from the patentee's instruction. Thus, the public's end of the bargain struck by the patent system is a full enabling disclosure of the claimed technology."

The presence or absence of working examples

There are no examples presented to enable one skilled in the art to make any one of the thousands of cyclopropene compounds which includes heterocyclic groups as claimed. For example when Z can be a group G, wherein G is an unsubstituted or substituted; unsaturated, partially saturated, or saturated, monocyclic, bicyclic, tricyclic, or fused; 4 to 14 membered carbocyclic or heterocyclic ring system wherein; 1) when the ring system contains a 4 membered heterocyclic ring, the heterocyclic ring contains 1 heteroatom; when the ring system contains a 5, or more: membered heterocyclic ring or a polycyclic heterocyclic ring, the heterocyclic or polycyclic heterocyclic ring contains from 1 to 4 heteroatoms; each heteroatom is independently selected from N, O, and S; the number of substituents is from 0 to 5 and each substituent is independently selected from X.

A disclosure should contain representative examples, which provide reasonable assurance to one skilled in the art that the compounds fall within the scope of a claim will possess the alleged activity. See *In re Riat et al.* (CCPA 1964) 327 F2d 685, 140 USPQ 471; *In re Barr et al.* (CCPA 1971) 444 F 2d 349, 151 USPQ 724.

The quantity of experimentation necessary

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Since there is no guidance and/or direction provided by the Applicants for the wide variety of the compounds and their preparation and method of use, one skilled in the art would have to go through undue experimentation to make and/or use the instant invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 11 is rejected under 35 U.S.C. 103 (a) as being unpatentable over SISLER, E, US Patent 6,194,350, DALY et al., US Patent 6,017,849, MINKIN (1997, IDS Reference). All the reference cited teach cyclopropene derivatives and methods of blocking ethylene receptors in plants which embraces presently claimed invention. SISLER teaches methods of inhibiting an ethylene response in a plant. According to the present invention, one such method comprises applying to the plant an effective ethylene response-inhibiting amount of a cyclopropene derivative or a composition thereof described. Long-chain cyclopropene derivatives are particularly preferred. The reference teaches a method of blocking ethylene receptors in plants by applying to the plants an effective ethylene receptor-blocking amount of a cyclopropene derivative or a composition thereof. The reference further teaches a method of inhibiting abscission in a plant, comprising applying to the plant an effective abscission-inhibiting amount of a cyclopropene derivative or a composition thereof. The reference further teaches a method of prolonging the life of a cut flower, comprising applying to the cut flower an effective life-prolonging amount of a cyclopropene derivative or a composition thereof. The

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reference teaches that the methods may be carried out in a number of suitable manners, such as by contacting the plant with a cyclopropene derivative or a composition thereof, whether in solid, liquid, or gaseous form, or by introducing the plant or cut flower into an atmosphere infused with the cyclopropene derivative or a composition thereof. These and other suitable methods of application are discussed in detail below.

The reference also teaches the use of a cyclopropene derivative for the preparation of an agricultural composition for carrying out any of the methods described above. See the entire document especially lines 22-59, col. 2, Table A in column 6, Table 1 and Table 2 in column 7.

DALY, James teaches that cyclopropene and its derivatives are made by reacting, in an inert environment, a metal amide salt, such as lithium amide salt, sodium amide salt, potassium amide salt, lithium diisopropylamide salt, sodium diisopropylamide salt or other metal amide salts, and a halogenated carbene, such as 3-chloro-3-methyl-2-methylpropene, 3-bromo-3-methyl-2-methylpropene, 3-chloro-2-methylpropene, 3-bromo-2-methylpropene or some other halogenated carbene. Methylcyclopropene is made under the same conditions with the same metal amide salts discussed above by reacting them with a halogenated methylpropene. The preferred halogenated methyl propenes are 3-chloro-2-methylpropene and 3-bromo-2-methylpropene. These halogenated methyl propenes lead to a high purity product for the intended use and are readily available.

The invention teaches the regulation of plant physiology, in particular to methods for inhibiting the ethylene response in plants or plant products, and has three embodiments. The first embodiment relates to methods of minimizing impurities capable of reversibly binding to plant

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ethylene receptor sites during the synthesis of cyclopropene and its derivatives such as methylcyclopropene, thereby avoiding the negative effects these impurities have on plants treated with cyclopropene and its derivatives. The second embodiment relates to complexes formed from molecular encapsulation agents such as cyclodextrin, and cyclopropene and its derivatives such as methylcyclopropene, in addition to cyclopentadiene and diazocyclopentadiene and their derivatives, thereby providing a convenient means for storing and transporting these compounds capable of inhibiting the ethylene response in plants, which are reactive gases and highly unstable because of oxidation and other potential reactions. The third embodiment relates to convenient methods of delivering to plants these compounds capable of inhibiting the ethylene response in the plants in order to extend their shelf life.

MINKIN teaches synthesis of cyclopropene compounds, see the entire document especially compound 2b in scheme 1 on page 239, compound 2b and scheme 2 on page 247 compounds 13a, 13b, 13c and 13d.

Instant claims differ from the reference in generic scope. The compounds are generically taught by the prior art.

The instant claimed cyclopropene compounds would have been obvious because one skilled in the art would have been motivated to prepare compounds embraced by the genus of the above cited references with the expectation of obtaining additional beneficial compounds. The instant claimed compounds would have been suggested to one skilled in the art because motivation is provided for these compounds capable of **inhibiting the ethylene response** in the plants in order to **extend their shelf life**. One having ordinary skill in the art would have been

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motivated to select the claimed cyclopropene compounds from the genus in the reference since such compounds would have been suggested by the reference as a whole.

It has been decided by the courts that a prior art disclosed genus of useful compounds is sufficient to render prima facie obvious a species falling within the genus. In re Susi, 440 F.2d 442, 445, 169 USPQ 423, 425 (CCPA 1971), followed by the Federal Circuit in Merck & Co. V. Biocraft Laboratories, 874 F.2d 804, 10 USPQ 2d 1843, 1846 (Fed. Cir. 1989).

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

Provisos in Claim

Proviso in claim 1 has been noted. Specification [0088], [0089], [0090] and [0091] discloses the disclaimer of certain groups. Applicant should inform the examiner what prior art has been disclaimed by this proviso?.

Claim Rejections - 35 USC § 103---2nd Rejection

Claim 1 and 11 rejected under 35 U.S.C. 103 (a) as being unpatentable of BAIRD ET al. (J. Chem. Soc. Perkin Trans 1, 1986, pp 1845-1853) and MORRISON & BOYD (Organic Chemistry, 3rd edition, Prentice Hall India, New Delhi, 1981, Chapter 6, pages 177-188). BAIRD teaches addition of substituents to cyclopropene compound 11 by addition of bromine in carbontetrachloride led to compound 12, see reaction scheme of

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compounds 10-17, in column 1 on page 1846 of the reference. A cyclopropane can be prepared by the addition reaction of cyclopropene. The reference teaches addition reactions of the cyclopropenes as well as some cyclopane derivatives

The reference MORRISON & BOYD teaches reactions of carbon-carbon double bond, electrophilic and free radical addition. See sections 6.1 to 6.6 where various reactions are exemplified for addition reactions. See especially potential energy diagram Fig. 6.3 on page 185 where the potential energy of the saturated compound is much lower than the unsaturated meaning that stability of saturated compound is much higher than the unsaturated compound.

10. It would have been obvious to one skilled in the art to perform addition reaction to change a double bond to a single bond i.e. change from cyclopropene derivatives to cyclopropane derivatives. Since double bonds are more reactive than single bonds the compounds are more stable when they saturated compared to when not saturated (i.e. containing double bonds).

The reference teaches the conversion of double bond to a single bond.

It would have been obvious to one skilled in the art to prepare additional cyclopropane compounds by. Since prior teaches these compounds it would have been obvious to select any halo atom such as iodo at both positions. In view of the teachings of the cited reference presently claimed invention is considered obvious.

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A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill might reasonably infer from the teachings. *In re opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA 1976). A reference is not limited to working examples. *In re Fracalossi* 215 USPQ 569 (CCPA 1982).

Accordingly, the burden of proof is upon applicants to show that instantly claimed subject matter is different and unobvious over those taught by prior art. See *In re Brown*, 173 USPQ 685, 688; *In re Best*, 195 USPQ 430 and *In re Marosi*, 218 USPQ 289, 293.

In absence of any criticality and/or unexpected results presently claimed invention is considered obvious over the prior art.

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

Response to Remarks and data in specification

- Rejection under 35 U.S.C. 102(b) as being anticipated by KOSTANSEK⁴. KOSTANSEK which discloses Benzene, 1-Chloro-4-cycloprop-enylmethyl⁵. (This compound is the elected species) **is withdrawn** because Applicants have clarified the confusion regarding

⁴ EDWARD CHARLES KOSTANSEK. United States Patent No. 6,548,448 B2. See the entire document, especially Compound 1, which is found in Example 1 in lines 1-48 of col. 12.

⁵ This compound can also be found in HCAPLUS, Registry Number 454251-27-5. This is enclosed for the Applicants' convenience.

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the priority. Examiner is always willing to help the Applicants in order to advance the prosecution.

- **Terminal disclaimers** have been filed on 10/07/2008 to overcome the double patenting rejections over KOSTANSEK and LAMOLA. Examiner will **withdraw** these rejections when the disclaimers will be approved by the office.
- Applicant's arguments about written description rejection are found persuasive therefore Rejection is withdrawn.
- Applicant's arguments about obviousness rejection has been fully considered but was not found persuasive. Applicant argue that MINKIN does not teach presently claimed subject matter because it teaches non analogous compounds and compounds 13 a to d are now disclaimed. Applicant regarding US '350 is that the reference does not teach any substituents which will lead to cyclopropenes with ethylene inhibition activity. Similarly arguments have been made about US 849. "One cannot show nonobviousness by **attacking references individually** where the rejections are based on combinations of references." In re Keller, 642 F.2d 413, 208 SPQ 871 (CCPA 1981); In re Merck & Co., Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). See MPEP 2145. The rejection is maintained on the combined teachings of the references.
 - See KSR Supreme Court of United States Decision (Decided April 30, 2007, KSR INTERNATIONAL CO. v. TELEFLEX INC. et al. No. 04-1350) where it states that (1) "However, the issue is not whether a person skilled in the art had the motivation to combine the electronic control with an adjustable pedal assembly, but whether a person skilled in the art had the motivation to attach the electronic

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control to the support bracket of pedal assembly". (2) "the results of ordinary innovation are not the subject of exclusive rights under the patent laws".

- Where a valid case of prima facie obviousness has been established, the burden shifts to applicant to demonstrate that a claimed functional property is applicable to the claim in its broad scope: In re Greenfield, 197 USPQ 227, 229 (CCPA 1978). (Holding that despite the fact that the rejection was one of obviousness and not anticipation, the burden was nevertheless on applicant to provide factual verification of the alleged functional property).
- Applicant is again informed that the database search on STN picked more than 800 references as a result of the search on claim 1.
- New STN search displayed 275 hits in CAPLUS. Claims are very broad and it not possible to search completely the claimed subject matter as in claim 1. Applicant may consider limiting the claims to reasonable genus.
- In order to be eligible for rejoinder, a claim to a nonelected invention must depend from or otherwise require all the limitations of an allowable claim. A withdrawn claim that does not require all the limitations of an allowable claim will not be rejoined. Furthermore, where restriction was required between a product and a process of making and/or using the product, and the product invention was elected and subsequently found allowable, all claims to a nonelected process invention must depend from or otherwise require all the limitations of an allowable claim for the claims directed to that process invention to be eligible for rejoinder. See MPEP § 821.04(b).

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Until elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claim that are not commensurate in scope with an allowed product will not be rejoined. See “Guidance on Treatment of Product and process Claims in light of *In re Ochiai*, *In re Brouwer* and 35 U.S.C. § 103 (b),” 1184 O.G. 86 (March 26, 1996).

In order to retain the right to rejoinder, applicant is advised that the claims to the nonelected invention(s) should be amended during prosecution to require the limitations of the elected invention. Failure to do so may result in a loss of the right to rejoinder. Rejoined claims must be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112.

See MPEP § 804.01.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sabiha Qazi whose telephone number is (571) 272-0622. The examiner can normally be reached on any business day except Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Krass Frederick can be reached on (571) 272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sabiha Qazi/

Primary Examiner, Art Unit 1612